DOCUMENT RESUME

ED 437 868 HE 032 700

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TITLE Teamwork and Interpersonal Conflict among University Administrators. ASHE Annual Meeting Paper.
PUB DATE 1999-11-00
NOTE 16p.; Paper presented at the Annual Meeting of the Association for the Study of Higher Education (24th, San Antonio, TX, November 18-21, 1999).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *College Administration; Collegiality; Cooperation; *Faculty College Relationship; Faculty Workload; Higher Education; *Interpersonal Relationship; Job Satisfaction; Organizational Climate; Participative Decision Making; Private Colleges; *Quality of Working Life; Research Universities; State Universities; Stress Variables; *Teamwork; *Work Environment
IDENTIFIERS *ASHE Annual Meeting

ABSTRACT

This study investigated the extent to which organizational and personal variables are related to work environments characterized by teamwork and collaboration on the one hand, or interpersonal conflict and stress on the other. The study examined major organizational features of 120 public and private research universities, their administrative work environments, and the individual characteristics of 1,194 study participants with job titles ranging from vice presidents to deans and directors. Data was gathered from national databases and participant surveys. Variables considered were campus characteristics (size, wealth, faculty/undergraduate quality, public/private, percent of students in dorms, rural environment, percent minority students); administrator characteristics (age, sex, academic/administrative rank, personal/financial/health); perceived work climate (regulatory, controlled, inadequate funding/facilities, time/workload pressures, administrative teamwork). The most robust finding was that both teamwork and interpersonal conflict are conditions in the lives of most study participants. In general, it was found that work environments characterized by higher levels of teamwork and collaboration are more strongly associated with organizational characteristics and administrative rank, while environments characterized by high levels of interpersonal conflict and stress are more strongly associated with characteristics such as workload pressure and personal/financial stress. Female managers were more likely to report a climate of teamwork. (Contains approximately 54 references.) (CH)

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TEAMWORK AND INTERPERSONAL CONFLICT AMONG UNIVERSITY ADMINISTRATORS

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This paper was presented at the annual meeting of the Association for the Study of Higher Education held in San Antonio, Texas, November 18-21, 1999. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

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ABSTRACT

This research investigates the extent to which an array of organizational and personal variables are related to work environments characterized by teamwork and collaboration on the one hand, and interpersonal conflict and stress on the other. If managerial satisfaction is important to maintaining healthy and productive organizations, and if teamwork and conflict exert positive and negative influences respectively on satisfaction, then understanding the individual and organizational variables that are associated with teamwork on the one hand, and with conflict on the other, becomes important to campus officials, scholars, and policy makers alike. The study examines the major organizational features of 120 public and private doctoral granting universities, their administrative work environments, and the individual characteristics of the 1194 participants in the study. Work atmospheres of teamwork and interpersonal conflict are each the best negative predictor of the other. Teamwork is more strongly associated with organizational characteristics and administrative rank, while conflict is more strongly associated with workplace and personal characteristics.

The authors acknowledge with appreciation the earlier data collection and database development provided by Shaukat Malik, Office of Institutional Research, SUNY Stony Brook, and by Kelli Parmley, Associate for University Financial Analysis, SUNY System Administration

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TEAMWORK AND INTERPERSONAL CONFLICT AMONG UNIVERSITY ADMINISTRATORS

The Research and Policy Problem

Studies of work environments and management effectiveness are far more prevalent in corporate and government organizations than in higher education institutions. The organizational literature, especially from business organizations, indicates a relatively strong connection between worker satisfaction and beneficial outcomes like higher productivity and lower turnover (Tett & Myer, 1993; Volkwein & Parmley, 2000). In higher education, scholars and accrediting bodies alike believe that effective organizations produce satisfied organizational members (c.f., Cameron, 1978; Middle States, 1996). Thus, measures of student, faculty, and administrative satisfaction in colleges and universities receive increasing attention as indicators of organizational climate and educational effectiveness (Bauer 1998).

Satisfaction studies at college campuses, however, have concentrated largely on populations of students and faculty, rather than on administrators. Student and faculty satisfaction scales are in widespread use, and several organizations publish instruments and offer scoring services (Bauer 1998). The majority of satisfaction studies that focus on campus employees have examined the satisfaction levels of faculty rather than other employee categories (Austin & Gamson 1983, Gmelch, Lovrich, and Wilke 1984, Cotton and Tuttle 1986, Smart 1990, Olsen 1993, Hagedorn 1994). The few studies of administrative satisfaction in higher education focus primarily on understanding the dimensions and levels of satisfaction, rather than on examining the factors producing satisfaction and the subsequent connections to important outcomes such as turnover and productivity (Solomon & Tierney 1977, Smart and Morstain, 1975, Blix and Lee 1991, Glick 1992).

The importance of teamwork, and the debilitating effects of interpersonal conflict are becoming documented in the literature as highly important contributors to employee satisfaction. Recent scholarship supports the constructive influences of teamwork and cooperative work arrangements (Bensimon and Neuman, 1993), and Hagedorn's research (1996) shows that positive interpersonal relationships improve job satisfaction and also lessen job-related stress.

Two recent studies reveal a consistent connection between several measures of administrative satisfaction and the human relations aspects of the immediate work environment reported by university managers. In their study of public universities, Volkwein, Malik, and Napierski-Prancl(1998) found that teamwork exerts a consistently positive influence on administrative satisfaction, and interpersonal conflict exerts a consistently negative influence. Volkwein and Parmley (2000) discovered almost identical results in a similar study among private university managers. They found that work place relationships and an atmosphere of teamwork are almost universally important contributors to every dimension of administrator job satisfaction. These findings from the higher education literature are consistent with evidence from public administration research (Emmert and Taher, 1992).

If managerial satisfaction is important to maintaining healthy and productive organizations, and if teamwork and conflict exert positive and negative influences respectively on satisfaction, then understanding the individual and organizational variables that are associated with teamwork on the one hand, and with conflict on the other, becomes important to campus officials, scholars, and policy makers alike.

Purpose of the Study and Conceptual Framework

This research investigates the extent to which an array of organizational and personal variables are related to work environments characterized by teamwork on the one hand, and conflict on the other. The measures for this study have been assembled consistent with a variety of theoretical perspectives from the research literature, especially organizational and systems perspectives, and the literature on employee work environments and job satisfaction.

Organization and Systems Perspectives

The internal and external dynamics of organizations vary, and these variations produce different outcomes. The organizational literature generally leads us to expect that the different components of a complex organization may exhibit different climates for its workers. For example, Katz and Kahn's taxonomy (1978) suggests that the functional subsystems of an organization explain variations in workplace behavior and values. Thus, managers in one part of the university, like the production subsystem, may experience different extrinsic and intrinsic rewards from those in the adaptive or boundary maintenance subsystems.

Moreover, an array of campus structural characteristics influence organizational life. Studies have demonstrated that campus mission, size, wealth, complexity, and selectivity exert significant influences (ranging from small to large) on a variety of internal transactions and outcomes (Austin & Gamson 1983; Hall 1995; Pascarella and Terenzini, 1991; Volkwein, 1989; Volkwein et al. 1998).

Other perspectives from organization theory emphasize the importance of the organization's environment (Hall, 1995; Lawrence and Lorsch, 1967; Aldrich, 1979; Pfeffer and Salancik, 1978). Thus, universities which are more highly valued and protected by their environments exhibit different work climates than those which are not. Universities that are more heavily regulated present different managerial challenges than those with more autonomy (Volkwein 1987).

Work Relationships, Conflict, Stress, Job Satisfaction, and Teamwork

Person-environment fit is an important moderating influence on occupational stress and workplace climate (Blau 1981; Blix and Lee 1991), and the main source of stress for educational administrators occurs in the work environment (Swent and Gmelch 1977). Job and workload stress exert negative influences on one's work and are almost always included in studies of the work environment (Blau 1981, Blix & Lee 1991, Olsen 1993, Hagedorn 1996, Volkwein, Malik and Napierski-Prancl, 1998).

The literature on conflict indicates that conflict can be creative and constructive, or divisive and destructive (Holton 1995). In the workplace, conflict takes many forms – conflict over tasks and resources, over processes and values, and over relationships among people (Holton 1995; Jehn 1997). Interpersonal conflicts – people relationships -- almost always produce negative outcomes (lower productivity, lower satisfaction), so this is the focus in the current study.

There is general agreement in the literature that job satisfaction is multi-dimensional (Herzberg 1966; Austin and Gamson 1993; Hackman and Lawler, 1971; Kalleberg 1977). Most studies conclude that satisfaction and work relationships are influenced by a complex array of personal and situational circumstances (Austin & Gamson, 1983; Hoppock, 1977; Mumford, 1972; Bruce and Blackburn, 1992). Research has shown that several work related variables exert positive and significant influences on administrative satisfaction -- a supportive organizational culture, teamwork, relationships with colleagues

and superiors, worker autonomy, and self-fulfillment (Berwick 1992, Austin & Gamson 1983, Bensimon & Newman 1993; Boone 1987, Lawler 1986, Rigg 1992, Volkwein, Malik and Napierski-Prancl, 1998).

Universities have long histories of collaborative teamwork for delivering instructional programs and conducting research projects. However, the use of administrative teams and managerial teamwork have only recently entered the academy from the business world. The value of administrative teams as contributors to goal attainment, satisfaction, and productive change in higher education organizations has been demonstrated by several studies during the past decade (Bensimon & Newman 1993; Frost, 1998).

Individual Characteristics

Research in organizations suggests a number of personal variables that might influence the work relationships of managers in colleges and universities. For example, one's physical and mental health is a major condition influencing all aspects of one's personal and occupational life (Spector, 1997). High levels of stress are associated with lower levels of satisfaction (Gmelch et al. 1984; Smith, et al. 1995; Sullivan & Bhagat, 1992). Higher education studies have detected differences associated with age and retirement proximity (Austin, 1985; Lee & Wilbur, 1985; Solomon & Tierney, 1977), with length of service (Bamundo & Kopelman 1980), with sex (Austin 1985; Hagedorn 1996), with level of education (Martin and Shehan 1989), with administrative rank (Austin & Gamson 1983), and with administrative area (Glick, 1992).

Research Methods

Using these various perspectives to guide our research design, we created the analytical database for this study drawing information from a wide range of different sources. First, we elicited the cooperation of the President's Office at each institution. Approximately half of the nation's Carnegie research and doctoral universities agreed to participate in the study. Second, using national databases, we collected data reflecting the major organizational features of the 120 cooperating public and private universities. Third, we collected survey information from over a thousand administrative participants in the study. The survey information includes their individual characteristics as well as their perceptions of the administrative work environment. Fourth, we then engaged in data reduction techniques using principle components analysis and scale building techniques. The resulting variables and scales form the basis for examining the correlates of teamwork and conflict.

On each campus we directed a survey instrument to managers with 12 specific job titles (ranging from vice presidents to deans and directors) – a total of 1440 administrators. This survey contains 7 questions about the respondent's background, and 44 items assessing their satisfaction, stress, and working conditions. Using follow-up procedures that guaranteed respondent anonymity, we eventually received a response rate of almost 83% -- 1194 surveys from 120 universities.

Table 1 lists all the variables used in this study, including their means and standard deviations. The first 15 variables are campus characteristics reflecting organizational mission, size, wealth, quality, complexity, and autonomy, based upon the factor analytic and scale building procedures described in Volkwein and Malik (1997). While many of these 15 organizational characteristics are significantly correlated with each other, they are not highly correlated with the other 15 variables in the study, as shown by the correlation table in the Appendix. The second variable group (16-23) includes self-reported respondent characteristics (age, sex, highest degree, rank, functional area, and personal and financial health). The third cluster (24-30) measures their self-reported working conditions and climate, adequacy of funding and facilities, work stress, interpersonal conflict, and work atmosphere of teamwork. These perceptions are self-reported on a series of questionnaire items with 5-point response

scales. More information about the calculation of these variables and their psychometric properties can be obtained from the senior author.

Results

We first examined the organizational variables to see if major structural characteristics are associated with differences in teamwork and conflict. Based on the literature, we expected that campus size and wealth would be the most likely organizational features to exert an influence on teamwork and conflict. Thus, in Table 2 we compare the managerial responses from the largest and best supported universities to those from the smallest and least supported. The table shows that responses from these campuses regarding the workplace atmospheres of teamwork and conflict are similar. Respondents also report similar levels of overall satisfaction and intrinsic satisfaction. Reflecting greater salaries and benefits in the "high-high" campuses, the respondents report significantly higher levels of satisfaction with their extrinsic rewards.

We also examined the responses by administrative rank and administrative function or subsystem, and these results are shown in Tables 3a and 3b. Table 3a shows the mean responses by functional subsystem across the sample. Those in the academic affairs (production) subsystem exhibit significantly higher levels of teamwork (3.54) and lower levels of conflict (1.86) than respondents in the other administrative subsystems. Table 3b displays the teamwork and conflict means by administrative rank. Those in the higher ranks, like Vice Presidents and Deans, generally report greater levels of teamwork and lower levels of interpersonal conflict than those in the lower ranks.

In order to examine the influences on teamwork and conflict, we developed four OLS Regression models shown in Table 4. The first two columns display the regression beta weights with teamwork as the dependent variable -- with conflict excluded, then included as a predictor. The third and fourth columns display the regression beta weights with conflict as the dependent variable – with teamwork exluded, then included as a predictor.

Overall, the Table 4 regression results confirm that teamwork and conflict each are the most important negative predictor of the other(r = -.33). The adjusted R-square for the teamwork regression model jumps from .065 to .147 when conflict (beta = -.328) is included in the model; and the adjusted R-square for the conflict regression model jumps from .201 to .272 when teamwork (beta = -.277) is included. These beta weights are far greater than any others in the analysis. Thus, teamwork and the absence of interpersonal conflict and stress are workplace conditions that tend to be found together in research and doctoral universities.

The Table 4 regression results, in the first two columns, indicate that University work environments which are characterized by teamwork and collaboration are significantly associated with several organizational and administrator characteristics. Significant organizational influences include percent students in residence (-.117, -.099) percent minority students (-.095, -.103), academic autonomy (.128, .078), and administrative autonomy (-.090). Significant administrator characteristics include being younger (age = .080), being female (.075, .073), and holding higher administrative rank(-.144, -.112). Having inadequate facilities diminishes teamwork in the first model, and experiencing personal financial stress (.066) is associated with teamwork in the second model. In general, then, an atmosphere of teamwork tends to be diminished by interpersonal conflict, and by minority students in residence. Teamwork appears to be enhanced by having a higher administrative rank, being female, and having greater autonomy.

The third and fourth columns of Table 4 show the regression models with interpersonal conflict as the dependent measure. [We did not measure other forms of conflict over things like tasks, work processes, resources.] On the whole, conflict and interpersonal stress are more strongly associated with those variables that measure personal and work environment characteristics, as distinct from organizational characteristics. For example, the conflict regression models show significant effects for workload pressure(.196, .185), controlled work environment(.098, .091), inadequate funding(.107, .096), inadequate facilities(.102, .084). Interpersonal conflict also appears to be exaccerbated by personal health stress(.122, .110), financial health stress(.127, .140), having administrative autonomy(.090, .073), being younger(-.085, -.066), being outside academic affairs (-.075, -.089), and, in one of the models, having lower rank(.079). In other words, interpersonal conflict among university managers appears to be the most influenced by the conditions of the immediate work environment and by several characteristics of individual administrators. The data suggest that a work atmosphere of teamwork diminishes interpersonal conflict. Also, younger administrators within academic affairs report less conflict. More Conflict is reported by university managers who experience both personal and workplace stress over workload, health, finances, and facilities.

Discussion

Previous studies have indicated the importance of the immediate work environment as an influence on the satisfaction and effectiveness of administrative managers. However, this is the first national dataset that has examined the work environment of university managers in relation to such a rich array of organizational and personal variables. Collecting information from 1194 administrative managers at 120 public and private doctoral universities, we examined the organizational, workplace, and personal characteristics of the respondents and their institutions, giving particular attention to the variables associated with an atmosphere of teamwork and collaboration versus a climate of interpersonal conflict and stress.

In general, we find that university work environments that are characterized by higher levels of teamwork and collaboration are more strongly associated with organizational characteristics and administrative rank. We also find that female managers are more likely to report a climate of teamwork. On the other hand, work environments that are characterized by higher levels of interpersonal conflict and stress are more strongly associated with workplace and personal characteristics, such as workload pressure and personal and financial health.

Our most robust finding is that atmospheres of teamwork and interpersonal conflict are opposite conditions in the lives of over a thousand university managers participating in this study. From this investigation, we do not know the extent to which teamwork dampens interpersonal conflict and promotes "getting along" among university administrators. Nor do we know the extent to which interpersonal conflict undermines administrative communication and team building. We do know from this study of teamwork and conflict that each is the best negative predictor of the other. We also know from the literature that failure to manage conflict results in disintegration of the team environment. We also know that good team building practices and real teamwork are associated with effective leadership, stress reduction, job satisfaction – and that these in turn are associated with individual and organizational productivity (Bensimon 1991; Newman 1991; Bensimon & Newman 1993; DeGeus 1988; Eckel 1998; Frost 1998; Hagedorn 1996; Holton 1995; Cross 1998; Katzenbach 1998;).

As expected, this study found significant influences exerted by administrative rank. We find that those occupying lower administrative ranks are less likely to find an atmosphere of teamwork and more likely to experience conflict. Thus, higher level managers, like Vice Presidents, experience more collaboration and less interpersonal stress and conflict than do personnel lower in the university

hierarchy. This is congruent with other scholarship suggesting that higher level administrators have refined good team thinking and team membership skills (Holpp, 1989), and that upper level personnel interact within a more mutually dependent atmosphere (Cross, 1998).

Some of the findings in this study did not match up with our expectations and warrant further examination. Based on the literature, we expected organizational size, wealth, and complexity to exert greater influences. We also expected greater differences in work climate among the functional divisions of the university, but only academic affairs shows a minor effect. Academic Affairs managers – who occupy positions in the production subsystem that carries out the organizational missions of teaching, research, and service – report significantly less interpersonal conflict than those respondents in the support and boundary maintenance subsystems such as business, student services, and planning. We suspect that there is an interaction effect between one's rank and the nature and centrality of one's job responsibilities that merits additional analysis.

This is one of only a handful of studies in higher education to examine the work climates of public and private university managers. Further research and scholarship in this area should explore the dynamics of administrative work climates in non-university post-secondary institutions, such as liberal arts colleges, specialized vocational institutions, community colleges, and non-traditional institutions of higher education. However, the evidence from this investigation is congruent with studies in business and government organizations. Work environments that are team oriented also tend to be free from interpersonal conflict, and vice versa. This has important implications for university managers, scholars, and policy makers alike, because administrative teamwork, interpersonal conflict, and job satisfaction have significant connections to institutional effectiveness.

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Table 1. Measures Used in the Multivariate Analyses

Constructs and Variables from Organizational and Job Satisfaction Literature	Nature of the Measure	Cronbach's Alpha	Means	Standard Deviations
Campus Characteristics*				
1. Campus Size	IPEDS Enrollment (in thousands)		20.7	10.9
2. Campus Wealth	IPEDS Expenditures per stu		15240.4	7682.2
3. Faculty Quality	* Computed Scale from NRC data	.94	157.17	148.9
4. Undergrad Quality	* Computed Scale from USNews + Barrons data	.90	43.86	10.58
5. Public/Private	0,1		.17	.38
6. Has Medical school/hospital	1.0		.6472	.8172
7. Has Agricult/Land Grant status	1.0		.28	.45
8. Is Public Flagship in the state	1.0		.30	.46
9. Has Constitutional recognition	1.0		.18	.38
10. Campus Age	1995 minus year founded		115.4	46.7
11. Percent students in dorms	From IPEDS		21.8	13.6
12. Campus rural environment	Rural-3/Suburban-2/Urban-1		1.7	.75
13. Percent Minority students	From IPEDS		17.4	14.8
14. Administrative Autonomy/Flexibility	*Categories ranging from least flexible (1) to most flexible (4). Private U. = 4		2.4	1.05
15. Academic Autonomy/Flexibility	*Categories ranging from least flexible (1) to most flexible (4). Private U. = 4		2.4	.99
Administrator Characteristics				
16. Age	4 categories from survey: Under 30; 30 to 44; 45-59; 60+		2.83	.56
17. Female	Female-1, Male-0		.71	.46
18. Highest Degree	Self identified from survey: High school diploma; Bachelors; Masters degree; Earned doctorate		2.98	.83
19. Academic Rank	Academic rank Yes-1/No-0		.81	1.56
20. Administrative Rank	From survey and categorized in 5 ranks. See Table 2		4.84	1.67
21. Administrative Division	From survey and translated into dummy variables. See Table 2		6.08	3.89
22. Personal Financial stress	1 item from survey on 5-pt scale indicating the extent to which Personal or family financial problems contribute to stress		1.74	.91
23. Personal Health stress	1 item from survey on 5-pt scale indicating the extent to which Personal or family health problems contribute to stress		1.87	1.11
Perceived Work Climate				
24. Regulatory Climate	1 item from survey on 5-pt scale rating the degree of external regulation		2.89	1.19
25. Controlled Work Environment	1 item from survey on 5-pt scale rating the amount of work environment control		2.70	1.01
26. Inadequate Funding	1 item from survey – 5 pt scale indicating the extent to which this contributes to stress		3.40	1.09
27. Inadequate facilities	1 item from survey – 5 pt scale indicating the extent to which this contributes to stress		2.90	1.20
28. Pressure of workload/time	2 items from survey --5 pt scale indicating the extent to which this contributes to stress	.75	3.54	.94
29. Administrative Teamwork	2 items from survey – 5 pt scale, assessing atmosphere of administrative teamwork	.69	2.06	.67
30. Interpersonal Conflict	7 items from survey --5 pt scale, indicating the extent of conflict with various categories of individuals	.77	3.30	.92

*These campus measures are modeled after procedures described in Volkwein & Malik (1997) and Volkwein & Parmley (2000)

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Table 2. Organizational Characteristics: Comparing Responses from the Largest and Most Affluent Campuses with the Smallest and Least Affluent

Measures of Teamwork, Conflict, and Satisfaction	High Size and High Wealth Institutions		Low Size and Low Wealth Institutions	
	Mean	Std. Dev.	Mean	Std. Dev.
Teamwork Atmosphere	3.37	.851	3.36	.963
Interpersonal Conflict	2.10	.649	2.07	.659
Overall Job Satisfaction	3.94	.80	3.90	.79
Intrinsic Satisfaction	3.97	.723	3.93	.722
Extrinsic Satisfaction*	3.37*	.923	3.17*	.904

* Difference between these means significant at the .05 level

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Table 3a. Position Characteristics: Comparing the Respondents by Administrative Area

Administrative Subsystem	Teamwork Score	Interpersonal Conflict Score
Production Subsystem (Academic Affairs)	3.54**	1.86**
Adaptive Subsystem (IR & Planning)	3.17	2.18
Support Subsystem (Business & Finance)	3.30	2.05
Support Subsystem (Human Resources)	3.07	2.14
Support Subsystem (Student Services)	3.25	2.12
Maintenance & Support Subsystem (Physical Plant)	3.30	2.18

** These means for Teamwork and Conflict are significantly different ($p < .01$) from all the other means in that column. The other means in each column are not significantly different from each other.

Table 3b. Position Characteristics: Comparing the Respondents by Rank

Administrative Rank	Teamwork Score	Interpersonal Conflict Score
1. President, Vice President, Provost, Chancellor, Vice Chancellor	3.66	1.86
2. Dean	3.43*	1.98
3. Associate Vice President, Controller	3.08**	2.12
4. Assistant Vice President	3.14*	2.02*
5. Director	3.22*	2.13*
6. "Assistant to"	3.22	2.13

(* $p < .05$ and ** $p < .01$) = The Teamwork and Conflict means for respondents in these ranks are significantly different from the corresponding scores for those in ranks 1 and 2.

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Table 4 **Regression Beta Weights for Measures of Teamwork and Conflict**

	Dependent Variables			
	Teamwork		Conflict	
	Model with Conflict Excluded	Model with Conflict Included	Model with Teamwork Excluded	Model with Teamwork Included
Independent Variables				
Campus Characteristics				
Campus Size				
Campus Wealth				
Faculty Quality				
Undergrad Quality				
Public/Private				
Has medical/hospital				
Has agricultural college				
Flagship				
Constitutional recognition				
Campus age				
Percent students in dorms	-.117***	-.099**		
Campus rural environment				
Percent minority students	-.095**	-.103***		
Administrative Autonomy	-.090*		.090**	.073**
Academic Autonomy	.128**	.078*		
Administrator Characteristics				
Age	.08*		-.085**	-.066*
Female	.075*	.073*		
Highest degree				
Academic rank				
Administrative Rank	-.144***	-.112***	.079*	
Division				
Academic			-.075*	-.089**
Business & Finance				
IR &Planning				
Human Resources				
Student Services				
Personal health stress			.122***	.110***
Personal Financial stress		.066*	.127***	.140***
Work Place Characteristics				
Perceived regulatory climate				
Controlled work environment			.098**	.091**
Pressure of workload/time			.196***	.185***
Inadequate funding			.107**	.096**
Inadequate facilities	-.073*		.102**	.084**
Conflict		-.328***		
Teamwork				-.277***
Adjusted R-Square	.065	.147	.201	.272

* = < .05
** = <.01
***= <.001
Non-significant Beta weights not shown

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